



Safety Data Sheet (SDS)

www.medkoo.com

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1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: 4-Aminophenol
 Product Catalogue Number: 591920
 Brand: MedKoo Biosciences
 CAS-No: 123-30-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Synthesis of substances.

1.3 Details of the supplier of the safety data sheet

Company: MedKoo Biosciences, Inc.
 2500 Gateway Centre Blvd. Suite 400, Morrisville, NC27560, USA
 Telephone: 919-636-5577
 Fax: 919-980-4831

1.4 Emergency telephone number

For chemical emergency spill, leak, fire, exposure, or accident call CHEMTREC day or night: Within USA and Canada: 1-800-424-9300. Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
 Acute toxicity, Oral (Category 4), H302
 Acute toxicity, Inhalation (Category 4), H332
 Skin sensitization (Category 1), H317
 Germ cell mutagenicity (Category 2), H341
 Specific target organ toxicity - repeated exposure (Category 2), Kidney, H373
 Short-term (acute) aquatic hazard (Category 1), H400
 Long-term (chronic) aquatic hazard (Category 1), H410

2.2 Label elements

Pictogram



Signal word

Warning

Hazard statement(s)

H302 + H332 Harmful if swallowed or if inhaled.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H373 May cause damage to organs (Kidney) through prolonged or repeated exposure.
 H400 + H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe dust.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection..
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P363 Wash contaminated clothing before reuse.
 P391 Collect spillage.
 P405 Store locked up
 P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards – no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms: NSC-1545; p-Aminophenol; para-Aminophenol; 4-Hydroxyaniline
 Formula: C₆H₇NO
 Molecular weight: 109.13
 CAS-No: 123-30-8

Component	Classification	Concentration
4-Aminophenol	Acute Tox. 4; Skin Sens.1; Muta. 2; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H332, H317, H341, H373, H400, H410; M-Factor - Aquatic Acute: 10; M-Factor – Aquatic, Chronic: 1	<= 100 %

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a doctor and show this safety data sheet.

If inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give artificial respiration. If breathing stops, give artificial respiration. Consult a doctor.

In case of skin contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

In case of eye contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x)

5.3 Precautions for fire-fighters

Wear self-contained breathing apparatus and suitable protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Avoid dust formation. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities.

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

Recommended storage temperature: Store at -20°C

7.3 Specific end uses

Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Use in a fume hood where applicable. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Body protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Respiratory protection

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Beige powder	Vapor pressure	No data available
Odor	phenol-like	Vapor density	No data available
Odor threshold	No data available	Relative density	1.28720 °C - OECD Test Guideline 109
pH	No data available	Solubility(ies)	No data available
Melting / freezing point	Melting point/range: 185 - 189 °C (literature values)	Partition coefficient	log Pow: ca.-0.09 at 25 °C (77 °F)
Boiling point / range	284 °C 543 °F at 1,013 hPa	Auto-ignition temperature	> 400 °C (> 752 °F) - Regulation (EC) No. 440/2008, Annex, A.16
Flash point	No data available	Decomposition temperature	No data available
Evaporation rate	No data available	Viscosity	No data available
Flammability (solid, gas)	No data available	Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available	Oxidising properties	No data available

9.2 Other safety information

Surface tension	61.13 mN/m at 1 at 20 °C (68 °F) - OECD Test Guideline 115
Dissociation constant	7.97 at 25 °C (77 °F)

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with: oxidizing agents, bases, acid anhydrides, acid chlorides, acids

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions (carbon oxides, nitrogen oxides (NO_x)). No known decomposition information.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 375 mg/kg

Remarks: Behavioral:Muscle weakness. Cyanosis Nutritional and Gross Metabolic:Changes in:Body temperature decrease.

LC50 Inhalation - Rat - 1 h - 5.91 mg/l

LD50 Dermal - Rabbit - > 10,000 mg/kg

Skin corrosion/irritation

Skin - Rabbit. Result: Mild skin irritation - 24 h

Serious eye damage/eye irritation

Eyes- Rabbit. Result: Mild eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Carcinogenicity

IARC:

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: SJ5075000

Absorption into the body leads to the formation of methemoglobin which in delayed 2 to 4 hours or longer.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish:	flow-through test LC50 - <i>Oryzias latipes</i> (Orange-red killifish) - 0.82 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates:	semi-static test EC50 - <i>Daphnia magna</i> (Water flea) - 0.089 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - <i>Pseudokirchneriella subcapitata</i> (algae) - 0.25 mg/l - 72 h (OECD Test Guideline 201)
Chronic toxicity to fish:	flow-through test NOEC - <i>Oryzias latipes</i> (Orange-red killifish) - 0.049 mg/l - 41 d (OECD Test Guideline 210)
Chronic toxicity to daphnia and other aquatic invertebrates	flow-through test NOEC - <i>Daphnia magna</i> (Water flea) - 0.206 mg/l - 21 d (OECD Test Guideline 202)

12.2 Persistence and degradability

Biodegradability	Aerobic - Exposure time 28 d
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Result: 6 % - Not readily biodegradable.
(OECD Test Guideline 301C)

12.3 Bioaccumulative potential

Bioaccumulation

Cyprinus carpio (Carp) - 56 d - 0.00015 mg/l(4-aminophenol)

Bioconcentration factor (BCF): 15 - 46
(OECD Test Guideline 305C)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company in accordance with National legislation. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

Contaminated packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with National legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID and IATA.

14.1 UN-Number

ADR/RID: 2512

IMDG: 2512

IATA: 2512

14.2 UN proper shipping name

ADR/RID:

AMINOPHENOLS

IMDG:

AMINOPHENOLS

IATA:

AMINOPHENOLS

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: No

IMDG: Marine pollutant: no

IATA: No

14.6 Special precautions for users

No data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

California Proposition 65

Not applicable

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

H302	Harmful if swallowed.
H302 + H332	Harmful if swallowed or if inhaled.
H332	Harmful if swallowed or if inhaled.
H341	Suspected of causing genetic defects.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further Information

Copyright © Medkoo Bioscience. This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists. See www.medkoo.com for additional terms and conditions of sale.

Preparation Information

MedKoo Biosciences, Inc.

Product Safety – multiple Region

Tel: 919-636-5577

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